

Synthesis of 6,7-Di-substituted 1-Azabicyclo-(3,2,1)-Octane 79-28-5-8/69

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemical and Pharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED: May 25, 1957

Card 3/3

AUTHORS: Nikitskaya, Ye. S., Mikhlin, Ye. Ye., SIV, T. N., Vinogradov, V. Ya., Yakhotov, L. N., Furshatova, V. Ya.

TITLE: Synthesis of the Hydrazines and Hydrzones of Some Heterocyclic and Aromatic Acids (Sintez hidrazirov i hydrazonov nekotorykh geterotsiklicheskikh i aromaticheskikh kis. t.)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, No 10,  
pp 2786 - 2790 (USSR)

ABSTRACT: In earlier investigations (Ref 1) it was shown that the hydrazine of isonicotinic acid and its hydrazones develop an antitubercular activity. It was, therefore, of interest to the authors to synthesize the hydrazines and their derivatives of the pyridyl-4-acetic acid,  $\beta$ -(pyridyl-4)-acrylic and  $\beta$ -(pyridic-4)-propionic acids, as these differ from the isonicotinoyl hydrazone only by the presence of one and more methyl groups between the pyridine nucleus and the hydrazine radical. Therefore, it was decided to obtain hydrazines and hydrzones from acids of the pyridine and quinuclidine series in order to explain the effect of the substituents on the biological effect of these compounds.

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Synthesis of the Hydrazines and Hydrazones of Some Heterocyclic Aromatic Acids 37, 7425-7428

compared in this report with those of the corresponding hydrazides of the pyridine series. The following hydrazides of the following acids were synthesized: isonicotinic, pyridyl-4-acetic-,  $\alpha$ , $\beta$ -erucic-,  $\alpha$ , $\beta$ -fatty-,  $\beta$ -(pyridyl-4)propionic-,  $\beta$ -(pyridyl-4),ro,io,ac-,  $\beta$ -(pyridyl-4)-cyclohexyl-,  $\beta$ -methyl-piperidyl-, and  $\beta$ -methyl-carboxylic acid. As the  $\beta$ -nitro-erucic acid is closely related to the isonicotinic acid, its hydrazide and hydrazone were also synthesized to explain its structure and activity. The synthesis of the hydrazides was carried out by the reaction of the ethyl esters of the acids with hydrazine hydrate in alcohol solution (3 refs.), already earlier synthesized by the authors. The subsequent reaction of the hydrazides with malonyl dihydrazide gave the hydrazones. The results of the synthesis, analysis, and biological activity of the substituted aromatic acids and their hydrazides and hydrazones are summarized.

Cor. 2, 1

Synthesis of the Hydrazines and Hydrazones of Some Heterocyclic and Aromatic Acids

S. V. Tikhonov et al.

and 6 references, 3 of which are Soviet.

ASSOCIATION: Vsesoyuznyy khimiko-farmaceuticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemopharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED: September 28, 1967

Carl J. J.

## AUTHORS:

Furshatova, V. Ia., Michlina, Ye. Ye., S.V./79-22-126-71  
Rubtsov, M. V.

## TITLE:

Investigation of the Formation Reaction of N-Substituted  
2-Aminomethyl-3-Vinyl Quinuclidines (Izuchenije reaktsii  
obrazovaniya N-zameshchennykh 2-aminometil-3-vinilkhinukli-  
dinov)

## PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 477-485 (USSR)

## ABSTRACT:

The question is raised in the present paper, whether the N-substituted compounds of 2-aminomethyl-3-( $\beta$ -oxyethyl)-quinuclidine can be transformed into N-substituted compounds of 2-aminomethyl-3-vinyl quinuclidine by distilling the respective stearates and benzoates at normal pressure. Esters were obtained by the reaction of chloric anhydride of stearic and benzoic acid with the N-substituted compounds of 2-aminomethyl-3-( $\beta$ -oxyethyl)-quinuclidine in benzene solution. On distilling quinuclidine (I) two quinuclidines (II and III) were formed. They were separated by treating the mixture with mercury acetate in acetic acid solution, involving the subsequent separation of the product of the affiliation of mercury acetate to the unsaturated compound (II) and the

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Investigation of the Formation Reaction of  
N-Substituted 2-Aminomethyl-3-Vinyl Quinuclidines

SCV 79-29-2-26/71

separation of (II). Besides (II) and (III) also ethyl stearate was separated. The formation of compound (II) is evidently accompanied by a separation of stearic acid (Scheme 1). Only the tricyclic derivative (III) and ethyl benzoate (Scheme 2) result from the distillation of compound (IV). A similar process is observed on heating quinuclidine (V) up to boiling temperature, in which connection benzoic acid, besides (III) is separated (Scheme 3). Heating of the compounds (VI) and (IX) with phthalic anhydride in the presence of benzene sulfo acid at 285° led only to compound (III)(Scheme 4). The structure of 2,3-(3',4'-N-ethyl piperidine)-quinuclidine was proven by a counter-synthesis, proceeding from 3-carbethoxy methyl quinuclidine-2-carboxylic acid. There are 5 references, 2 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemico-pharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED: January 3, 1958  
Card 2/2

AUTHORS: Mikhлина, Е. Е., Rubtsov, M. V. SOV/79-29-1-27/74

TITLE: Cyano-Ethylation of Quinuclidone-3 (Tsianetilirovaniye khinuklidona-3)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, pp 118-121 (USSR)

ABSTRACT: A very interesting problem is represented by the cyano-ethylation of quinuclidone-3 hitherto not investigated. The present paper deals with this question. In its transformation with an excess of acrylonitrile into dioxane or tertiary butyl alcohol in the presence of 30 % potash lye in methyl alcohol, a mixture of mono- and dicyano-ethylated products is formed. The general yield of mono- and dicyano-ethylated quinuclidones, as well as their quantitative relation obtained depends on the solvent used. The yield of them thus amounts to about 44 % if the reaction is performed in dioxane. The main product of the mixture (85 %) is represented in this case by the dicyano-ethylated quinuclidone-3. The substitution of tertiary butyl alcohol for dioxane increases the total yield up to 70 %, while at the same time also the percentage of monocyano-ethylated quinuclidone-3 increases (about 35 % of the total sum of cyano-ethylated products). On a reaction of quinuclidone-3

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**Cyano-Ethylation of Quinuclidone-3**

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with acrylonitrile at the molar ratio the yield of these products is 10 % only. On the basis of the reactions performed the structure of formula (II) was assigned to the mono-cyano-ethylated quinuclidone-3. The reduction of quinuclidone (IV) yielded the quinuclidine (VI). The synthesis performed is presented by scheme 1. The dicyano-ethylated quinuclidone-3 can have the structure 2,2- or 2,4-di-( $\beta$ -ethyl cyanide)-quinuclidone-3. By saponification of the ketonitrile the keto diacid is formed. The latter is not transformed into the tricyclic unsaturated compound (A) on heating with acetic acid anhydride, which would be the case if the ethyl cyanide groups were in position 2 and 4. On the basis of these data, the structure (VII) is the only correct one for the dicyano-ethylated quinuclidone-3. The quinuclidines (XIII), (IX), and (X) the dihydrazide (XI) and further quinuclidines (XII), (XIII), and (XIV) were synthesized from it according to scheme 2. There are 4 references, 3 of which are Soviet.

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Cyano-Ethylation of Quinuclidone-3

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ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsev-ticheskiy institut imeni S. Ordzhonikidze (All-Union Chemico-pharmaceutical Scientific Research Institute imeni S. Ordzhonikidze)

SUBMITTED: November 30, 1957

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5(3)

SCV/79-29-6-38/72

AUTHORS: Furshatova, V. Ya., Mikhлина, Ye. Ye., Rubtsov, M. V.

TITLE: Synthesis of the Substituted Compounds of the 7-Aminomethyl-6-( $\beta$ -aminoethyl)-1-azabicyclo-(3,2,1)-octane (Sintez zameshchennykh 7-aminometil-6-( $\beta$ -aminoetil)-1-azabitsiklo-(3,2,1)-oktana)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 6,  
pp 1945 - 1949 (USSR)

ABSTRACT: For the purpose of carrying out the synthesis of the 6,7-di-aminosubstituted compounds of 1-azabicyclo-(3,2,1)-octane the hydrochloride of 6-carboxymethyl-1-azabicyclo-(3,2,1)-octane-7-carboxylic acid (I) was converted into the corresponding acid chloride (II) by means of thionyl chloride. The latter was reacted with alkyl (aryl) amines and the amides (III) were obtained. The reduction of the amides with aluminum-lithium hydride led to the substituted compounds of the 7-aminomethyl-6-( $\beta$ -aminoethyl)-1-azabicyclo-(3,2,1)-octane (IV) (Scheme 1). In the investigation of the properties of the diamines synthesized (IV) it was found that diamines which contain a non-substituted hydrogen atom bound to nitrogen, may be converted into the tricyclic system 6,7-(3',4'-N'-alkyl piperidino)-1-azabicyclo-

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Synthesis of the Substituted Compounds of the  
7-Aminomethyl-6-( $\beta$ -aminoethyl)-1-azabicyclo-(3,2,1)-octane

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(3,2,1)-octane (V) in the distillation in vacuum (Scheme 2). The formation of the tricyclic system (V) in this distillation was confirmed by the opposite synthesis of 6,7-(3',4'-N-benzyl piperidino)-1-azabicyclo-(3,2,1)-octane (V a) according to scheme 3. The 7-benzyl aminomethyl-6-( $\beta$ -oxyethyl)-1-azabicyclo-(3,2,1)-octane (Ref 4) was converted into 7-benzyl aminomethyl-6-( $\beta$ -chloroethyl)-1-azabicyclo-(3,2,1)-octane by means of thionyl chloride which yielded the compound (V a) in boiling with pyridine. There are 4 Soviet references.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemical-pharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED: May 15, 1958

Card 2/2

5(3)

## AUTHORS:

Mikhлина, Ye., Rubtsov, V. I.

Sov. - 1959, v. 1, p. 11

## TITLE:

Synthesis of 3-Oxy-3-alkyl(aryl)-quinuclidines and their esters  
(Sintez 3-oxo-3-alkil(aril)-kvinuklidinov i ikh esterov)

## PERIODICAL:

Zhurnal obshchey khimii, 1959, v. 1, no. 1, p. 1337-1341 (Chem.)

## ABSTRACT:

Rubtsov and coworkers demonstrated in earlier reports (refs. 1, 2) that some 2-mono- and 2,3-disubstituted quinuclidines are of high biological activity. With the object of examining the less investigated 3-substituted quinuclidines, the authors arrived at the synthesis of a number of 3-oxy-3-alkyl(aryl) quinuclidines and their esters. For the synthesis the authors used quinuclidone-3 which gave compounds (I) by reaction with organo-magnesium compounds. In some instances the tertiary alcohols were obtained in considerably higher yields by the use of organo-lithium compounds. Thus, the reaction of quinuclidone-3 with methyl-magnesium iodide gives 3-oxy-3-methylquinuclidine, while the yield was 60% when methyl-lithium was used (Scheme 1). The conversion of the quinuclidines into the esters (II) was effected by heating the corresponding tertiary alcohols with acid chlorides. The best results were attained when chlor form solutions were used for the reaction.

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Synthesis of 3-Oxy-3-alkyl(aryl)-quinuclidines  
and Their Esters

Sov. 75-1-1507

On heating (Ia) for some time with acidic chlorides with, at a solvent the compound (IIIA) was obtained instead of the corresponding esters. The ready transformation of (Ia) to (IIIA) induced the authors to study the effect of other dehydrating reagents on the quinuclidines (I). For this, see thionyl chloride and sulfuric acid were used. It was found that (Ia) on short treatment with thionyl chloride (15 mol) gave a mixture of (IIIA) with 3-phenyl-3-alkyl-quinuclidine which was difficult to separate. Heating this mixture with about 10% alkali hydroxide yielded (IIIA) only. On heating (Ia) with 70% sulfuric acid (10) gave (IIIA) in 90% yield. The substance (Ia) remained unaffected by heating with 70% sulfuric acid, but became completely resinous with 80% acid. On heating (Ia) for a short time with thionyl chloride (equimolar proportions) in benzene (IIIA) was formed (Scheme 2). The esters of the 3-oxy-3-alkyl(aryl)-quinuclidines have slight pharmacological activity.

There are 6 references, 2 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmaceuticheskiy institut imeni S. Orizhenikidze (All-Union Scientific Chemical-Pharmaceutical Research Institute imeni S. Orizhenikidze)

SUBMITTED: May 15, 1958  
Card 2/2

RUBTSOV, M.V.; MIKHLINA, Ye.Ye.; YAKHONTOV, L.N.

Chemistry of quinuclidine derivatives. Usp.khim. 29  
no.1:74-105 Ja '60. (MLRA 13:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.  
(Quinuclidine)

MIKHLINA, Ye.Ye.; VOROB'YEVA, V.Ya.; RUBTSOV, N.V.

Synthesis of 3- and 4-hydroxypiperidine derivatives. Zhur. ob.  
khim. 30 no.6:1885-1893 Je '60. (MIRA 13:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevti-  
cheskiy institut imeni S. Ordzhonikidze.  
(Piperidine)

MIKHLINE, Ye.Ye.; RUBTSOV, M.V.

New steps toward the synthesis of  $\beta$ -quinuclidineacetic acid. Zhur,  
ob. khim. 30 no.9:2970-2977 S '60. (MIRA 13:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskii  
institut imeni S. Ordzhonikidze.  
(Quinuclidineacetic acid)

NIKILINA, Ye.Ye.,; VOROB'YEVA, V. Ya.; RUBTSOV, M.V.

Synthesis of polymethylene-bis-quinocladinium halides. Zhur.  
ob.khim. 31 no.8:2609-2613 Ag '61. (MIRA 14:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevcheskiy  
institut imeni S. Ordzhonikidze.  
(Quinocladinium compounds)  
(Polymethylene compounds)

MIKHLINA, Ye.Ye.; RUBTSOV, M.V.; VOROB'YEVA, V.Ya.

Synthesis of quimclidine-2, 3-dicarboxylic acid. Zhur. ob. khim.  
31 no.10:3251-3255 O '61. (MIRA 14:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy  
institut imeni S. Ordzhonikidze.  
(Quimclidinecarboxylic acid)

MIKHLINA, Ye.Ye.; RUBTSOV, M.V.

3-Quinuclidinone in the Knoevenagel reaction. Zaur.ob.khim. 32  
no.9:2935-2940 S '62. (MIRA 15:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy  
institut imeni S. Ordzhonikidze.  
(Quinuclidinone) (Knoevenagel reaction)

AUTHORS: Furshatova, V. Ya., Mikhлина, Ye. Ye., Rubtsov, M. V.

TITLE: The Synthesis of the 6-Carboxymethyl-1-Diazocyclo-(3,2,1)-octane-7-Carboxylic Acid and Some of its Derivatives  
(Sintez 6-karboksimetil-1-azabitsiklo-(3,2,1)-oktan-7-karbonovoy kisloty i nekotorykh yeye proizvodnykh)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 3. pp. 668-675  
(USSR)

ABSTRACT: A number of works is dealing with the synthesis and the biological investigation of the derivatives of quinuclidine, the 1 - diazocyclo - (2,2,2) - octane (refs. 1-3). The dicyclic system isomeric to quinuclidine, the 1-diazocyclo-(3,2,1)octane, has however, not been sufficiently investigated until now. Only a limited amount of C - monosubstituted 1 - diazocyclo-(3,2,1) - octanes were obtained. The substituted octanes of the mentioned structure were not synthetized. Among the 2,3-disubstituted compounds of quinuclidine synthetized by the authors a number of biologically active products was found so that it was also

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The Synthesis of the 6-Carboxymethyl-1-Diazocyclo-octane-7-Carboxylic Acid and Some of its Derivatives

7-28 3-23 '6

to  
of interest/obtain the isomeric 6,7-disubstituted 1-Diazo-cyclo-(3,2,1) octanes and to compare the biological and chemical properties of the compounds of two isomeric series with each other. In the present work the synthesis of 6-carboxymethyl - 1 -diazocyclo-(3,2,1)-octane-7-carboxylic acid and some derivatives is described. It was carried out according to the mentioned scheme (see formulae (I) to (X)). Thus the synthesis of 6-carboxymethyl-1-diazocyclo - (3,2,1) octane-7-carboxylic acid is described. The reaction process is shown as follows: From the ethylester of  $\beta$ -(pyridyl-3)-acrylic acid passing through the ethylesters of  $\beta$ -dicarboxymethyl- $\beta$ -(piperidyl - 3)- propionic acid,  $\beta$ -carbethoxybromo-ethyl-(piperidyl -3)-propionic acid to the diethylester of 6-carboxymethyl-1-diazo-(3,2,1)-octane- 7,7 -dicarboxylic acid. Together with these mentioned products the following compounds are synthetized: 1.- The diethylester of 6-carboxymethyl-1-diazocycle-(3,2,1)-octane-7-carboxylic acid.  
2.- The di(diethylaminoethyl)- and di-(dimethylaminoethyl) ester of the 6-carboxymethyl-diazocyclo-(3,2,1)-octane-7-carboxylic acid. 3. 6-( $\beta$ -oxymethyl)-7-Oxymethyl)-diocyclo-

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The Synthesis of the 6-Carboxymethyl-1-Diazocyclo-  
octane-7-Carbocyclic Acid and Some of its Derivatives

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(3,2,1)-octane and 6 ( $\beta$ -chloroethyl)-7-chloromethyl-1-diazocyclo-(3,2,1)-octane

There are 4 references, 2 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemical and Pharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED: March 16, 1957

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5.3610, 5.3590

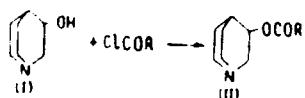
11/7  
5.3590

AUTHORS: Mikhlin, Yu. Ya., Rabin, M. V.

TITLE: Synthesis of  $\beta$ -Substituted Quinolinones

PERIODICAL: Zhurnal obshchey khimii, 1969, Vol. 39, No. 1, pp. 165-171 (USSR)

ABSTRACT: Synthesis of several esters of  $\beta$ -hydroxyquinolinellone (I) was described.  $\beta$ -Hydroxyquinolinellone (I) was obtained from  $\beta$ -quinolinellone by reduction with lithium aluminum hydride in ether. Esterification of (I) was carried out with acid chlorides in benzene or in chloroform.



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Synthesis of  $\beta$ -Substituted Quinuclidine

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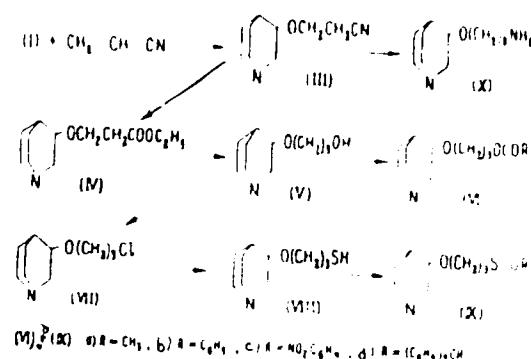
3-(*p*-Aminobenzoyloxy)-quinuclidine was obtained by reduction of 3-(*p*-nitrobenzoyloxy)-quinuclidine over Raney nickel. The same reaction over Pt catalyst gave 3-(*p*-aminocyclonexanoyloxy)-quinuclidine. 3-( $\beta$ -Phenylpropoxy)-quinuclidine was prepared by hydrogenation of 3-hydroxy quinuclidine ester and cinnamic acid. 3-( $\alpha$ -Carboxy, X)-quinuclidine (III), was obtained from 3-hydroxy quinuclidine and acrylonitrile in the presence of catalytic (5%) solution in methanol). 3-( $\gamma$ -Aminopropoxy)-quinuclidine (X) was formed by reduction of (III) with lithium aluminum hydride. Compound (III) was converted into 3-( $\alpha'$ -carbethoxyethoxy)-quinuclidine (IV) in three different ways: (1) Nitrile (III) was heated with anhydrous alcohol and concentrated H<sub>2</sub>SO<sub>4</sub>. (2) Nitrile (III) was hydrolyzed with dilute acid and esterification. (3) Dry HCl was bubbled into a boiling anhydrous alcohol solution of (III). The yield of (IV) was 60-75%. The best results were

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## Synthesis of 3-Substituted Indolin-2-ones

77-11  
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obtained by the third method.



(IV) with lithium aluminum hydride is converted into (V), which on heating with alcohol and acid chlorides in benzene gave corresponding esters (VI). Thionyl chloride with (V) forms 3( $\gamma$ -chloropropoxy)-quinclidine.

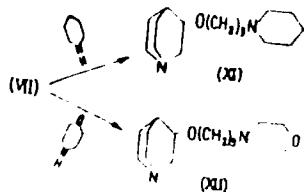
Card 3/7

## Synthesis of 3-Substituted Quinuclidine

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30V/7--3--1-3:173

(VII). The latter with thiourea and afterwards with alkali is converted into 3-( $\gamma$ -mercaptopropoxy)-quinuclidine. Acid chlorides react with (VIII) forming thioesters. (VII) was heated with piperidine, morpholine, and diethylamine. In the first two cases corresponding  $\beta$ [ $\gamma$ -(N-piperidino)-propoxy]-quinuclidine (XI) and  $\beta$ -[ $\gamma$ -(N-morpholino)-propoxy]-quinuclidine (XII) were obtained.



(VII) with diethylamine probably forms a polymeric compound of (VII). The pharmacological investigation was made by K. A. Zaytseva under the direction of M.

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Synthesis of  $\beta$ -Substituted quinuclidine

D. Matnikovskiy.  $\beta$ -Amino- $\alpha$ -[4-(1-alkyl-4-piperidyl)-1-methylpropyl]amino-3-hydroxypropanoic acid.

Table I  
Esters of  $\beta$ -( $\gamma$ -hydroxyprooxy)-quinuclidine

Nr	R	Yield (%)	b <sub>P</sub> C.p.s.s.e. in mm)	m <sub>P</sub> of hydrochloride	Empirical formulae
1	CH <sub>3</sub>	84	73 - 74 (0.3)	173 - 175	C <sub>10</sub> H <sub>12</sub> O <sub>2</sub> N · HCl
2	C <sub>2</sub> H <sub>5</sub>	56.6	74 - 76 (0.3)	173 - 176	C <sub>10</sub> H <sub>14</sub> O <sub>2</sub> N · HCl
3	C <sub>3</sub> H <sub>7</sub>	58.2	84 - 85 (0.3)	173 - 177	C <sub>11</sub> H <sub>16</sub> O <sub>2</sub> N · HCl
4	(CH <sub>2</sub> ) <sub>2</sub> CH <sub>3</sub>	72.4	88 - 90 (0.3)	180 - 182	C <sub>12</sub> H <sub>18</sub> O <sub>2</sub> N · HCl
5	CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> (CH <sub>2</sub> ) <sub>n</sub> *	7.07	227 - 230 (0.7)	-	-
6	CH <sub>3</sub> OCH <sub>2</sub> *	6.65	101 - 103 (0.3)	172 - 174	C <sub>10</sub> H <sub>12</sub> O <sub>2</sub> N
7	C <sub>2</sub> H <sub>5</sub> SC <sub>2</sub> H <sub>5</sub> *	77.7	118 - 119 (0.3)	-	C <sub>10</sub> H <sub>14</sub> O <sub>2</sub> N
8	C <sub>6</sub> H <sub>5</sub>	71.5	148 - 150 (0.3)	238 - 240	C <sub>11</sub> H <sub>10</sub> O <sub>2</sub> N <sub>2</sub>

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Synthesis of  $\beta$ -Substituted Aminophenols77-74  
SGV-1-1-1-1-1-1

Table cont'd

No.	R	Yield (%)	b.p. pressure in mm)	m.p. of hydrochloride	Empirical formula
9	$\text{NO}_2\text{C}_6\text{H}_4$	83.5	140-145 ***	250-258	$\text{C}_{11}\text{H}_{10}\text{O}_2\text{N}_2 \cdot \text{HCl}$
10	$\text{C}_6\text{H}_5\text{C}_6\text{H}_4$	74.5		243-245 ****	$\text{C}_{13}\text{H}_{10}\text{O}_2\text{NBr} \cdot \text{HCl} \cdot \text{H}_2\text{O}$
11	$\text{OC}_6\text{H}_4\text{CH}_3$	88.5		198-200	$\text{C}_{14}\text{H}_{10}\text{O}_2\text{NCl} \cdot \text{HCl}$
12	$\text{C}_6\text{H}_5\text{OC}_6\text{H}_4$	89	180 (I)	165-167	$\text{C}_{14}\text{H}_{10}\text{O}_2\text{N} \cdot \text{HCl}$
13	$\text{C}_6\text{H}_5\text{CH}_2$ *	73.8	151-152 (0.6)		$\text{C}_{13}\text{H}_{10}\text{O}_2\text{N}$
14	$\text{C}_6\text{H}_5\text{CH}=\text{CH}_2$	86.5		187-189	$\text{C}_{10}\text{H}_{10}\text{O}_2\text{N} \cdot \text{HCl}$
15	$3,4,5-(\text{OCH}_3)_3\text{C}_6\text{H}_2$ *	53	67-70 ***	204-205	$\text{C}_{14}\text{H}_{10}\text{O}_2\text{N} \cdot \text{HCl}$
16	$\text{C}_6\text{H}_5\text{NH}$	70.2	131-142 (0.6)	231-233 ****	$\text{C}_{11}\text{H}_{10}\text{O}_2\text{N}$
17	$\text{C}_6\text{H}_4\text{NH}$	50.2	149-150 (0.5)	238-240 ****	$\text{C}_{13}\text{H}_{10}\text{O}_2\text{N}_2 \cdot 2\text{HCl}$

\* Empirical formula is given for the base

\*\*\* m.p. of base

\*\*\*\* Crystallized with 1 mole of HCl

\*\*\*\*\* m.p. is given for dihydrochloride

Card 1/7

Synthesis of 3-Substituted Quinuclidine

77374  
30773-36-1-3578

There is 1 table; and 5 references, 2 Soviet, 1 French, 2 U.S. The U.S. references are: L. H. Sternbach, S. Keiser, J. Am. Chem. Soc., 74, 2217 (1952); ibid. 74, 2215 (1952)

ASSOCIATION: Ordzhonikidze All-State Scientific-Research Chemical-Pharmaceutical Institute (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze)

SUBMITTED: January 2, 1959

Card 7/7

MIKHLINA, Ye.Ya., RUBTSOV M.V

Synthesis of 1-azabicyclo (3.2.2)nonane-2-carboxylic acid. Zinat.  
khim. 32 no. 7.2177-2184 Jl '62. (MIRA 15 7)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy  
institut imeni S Ordzhonikidze.  
(Azabicyclononane) (Decanol: acid)

MIKHLINA, Ye.Ye.; RUBTSOV, M.V.

Reaction of 3-quinuclidinone with hydrazoic acid. Zhur. ob. khim.  
33 no. 7:2167-2172 J1 '63. (MIRA 16:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy  
institut im. S. Ordzhonikidze.  
(Quinuclidine) (Hydrazoic acid)

MIKHLINA, Ye.Ye.; VOROB'YEVA, V.Ya.; RUBTSOV, M.V.

Synthesis of 2,5-disubstituted quinuclidine. Zmir.ob.khim. 33  
no.12:3852-3857 D '63. (MIRA 17:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy  
institut imeni Ordzhonikidze.

RUBCOV, M.V. [Rubtsov, M.V.]; SARAPOV, I.M. [Sharapov, I.M.]; MASKOVSKIJ, M.D. [Mashkovskiy, M.D.]; MICHLINA, E.E. [Mikhлина, Е.Е.]; NIKITSKAJA, E.S. [Nikitskaya, Ye.S.]; VOROBJEVA, V.Ja. [Vorobyeva, V.Ya.]; USOVSKAJA, V.S. [Usovskaya, V.S.].

Synthesis and pharmacological research on quinuclidine, piperidine and pyridine derivatives. Cesk. farm. 13 no.6:299-315 Jl'64

1. Vsesoyuznyy vedecko-vyzkumnyy ustav pro chemii a farmacii, Moscow (VNICHEFI) [Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsev-ticheskiy institut].

MIKHLINA, Ye.Ye.; VOKOB'YEVA, V.Ya.; SHEDCHENKO, V.I.; RUBTSOV, M.V.

Structure of 3-quinuclidinone rearrangement products according  
to the Schmidt and Beckmann reactions. Zhur. org. khim. 1  
no.7:1336-1337 Jl '65. (MIKA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy  
institut imeni S.Ordzhonikidze i Institut khimii prirodnykh  
soyedineniy AN SSSR.

MARSHALL, ROBERT; TAYLOR, ROBERT V., JR.

Some properties of the  $\beta$ -isomer of 2,6-dimethyl-4-  
hydroxy-4-quinolinoline. J. R. MARSHALL, ROBERT V.  
TAYLOR, ROBERT V., JR.

J. Heterocyclic Compounds 1968, 5, 101  
Institut für Organische Chemie der Universität  
Köln, FRG

RUBTSOV, M.V.; YAKHONTOV, I.N.; MIKHLINA, Ye.Ye.

Hofmann degradation of 1,4-bis(pentamethylene piperazinium  
dichloride by means of a methanol solution of caustic potash.  
Zhur. ob. khim. 35 no.4:t21 Ap '65.

(MILK 18 5)

U. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevti-  
cheskiy institut imeni S. Ordzhonikidze.

ACC NR: AP6031301

SOURCE CODE: UR/0366/66/002/009/1707/1711

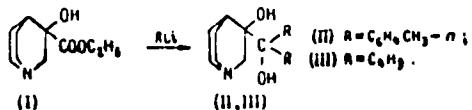
AUTHOR: Yanina, A. D.; Mikhлина, Ye. Ye.; Rubtsov, M. V.

ORG: All-Union Scientific Research Chemical-Pharmaceutical Institute imeni S. Orzhonikidze (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut)

TITLE: Pinacolone rearrangement in the series of 1-azabicycloalkanes. Part 2

SOURCE: Zhurnal organicheskoy khimii, v. 2, no. 9, 1966, 1707-1711

TOPIC TAGS: pinacolone rearrangement, pinacol, organic synthetic process, heterocyclic base compound

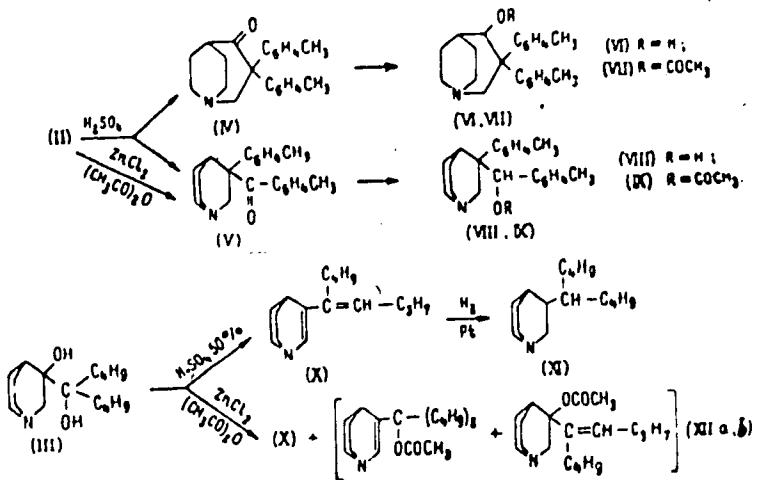
ABSTRACT: The reaction of 3-hydroxy-3-carboethoxyquinuclidino (I) with butyl and p-tollyllithium was used to synthesize 3-hydroxy-3-[ $\alpha$ , $\alpha$ -di(p-tolyl)- $\alpha$ -hydroxymethyl]-quinuclidine (II) and 3-hydroxy-3-( $\alpha$ , $\alpha$ -dibutyl- $\alpha$ -hydroxymethyl)quinuclidine (III):

The following reactions were also carried out:

Card 1/3

UDC: 547.834.4

ACC NR: AP6031301



The pinacolone rearrangement of compound (II) in 50% H<sub>2</sub>SO<sub>4</sub> leads to the formation of a mixture of two ketones: 3,3-di(p-tolyl)-4-keto-1-azabicyclo[3.2.2.]nonane (IV) and 3-(p-tolyl)-3-(p-methylbenzoyl)quinuclidine (V); on heating pinacol (II) with zinc chloride in acetic anhydride, only ketone (V) is formed. Under the same conditions, in the case of pinacol (III), whose alkyl radical is longer than that of (II), only

Card 2/3

ACC NR: AP6031301

processes of dehydration and conversion of the unsaturated compounds formed are observed. It is concluded that the introduction of a methyl radical into the phenyl ring of 3-hydroxy-3-( $\alpha,\alpha$ -diphenyl- $\alpha$ -hydroxymethyl)quinuclidine facilitates the course of the pinacolone rearrangement.

SUB CODE: 07/ SUBM DATE: 14Dec65/ OTH REF: 003

Card 3/3

ACC NR: AP6029082

SOURCE CODE: UR/0413/66/000/014/0156/0156

INVENTOR: Rubtsov, M. V.; Mikhлина, Ye. Ye.; Vorob'yeva, V. Ya.; Lebanov, D. I.; Komarova, N. A.

ORG: none

TITLE: Preparation of 1-carbethoxymethyl-4-carbethoxypiperidine. Class 12,  
No. 149106

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 156

TOPIC TAGS: ~~carbethoxymethylcarbonylpiperidine synthesis~~, ethyl isonipelete  
alkylation, chloroacetic acid ester, ALKYLATION, CARBON COMPOUND

ABSTRACT: To increase the yield and to simplify the preparation of the title compound by alkylation of ethyl isonipeicate (I) with ethyl chloroacetate, the hydrochloride of I is alkylated in anhydrous ethanol in the presence of  $\text{Na}_2\text{CO}_3$ . [WA-50; CBE No. 11]

SUB CODE: 07/ SUBM DATE: 05Sep61

Card 1/1

RUBTSOV, M.V.; MIKHLINA, Ye.Ye.; VEROBYEVA, V. Ya.; KOMAROVA, N.A.

Synthesis of 2,5,8-trisubstituted quinuclidine. Zhur. ob.  
khim. 34 no.7:2218-2221 Jl '64 (MIRA 17:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsev-  
ticheskiy institut imeni S. Ordzhonikidze.

LIPKOVICH, I. I.

USSR/Chemistry - Tautomerism, Theory of Resonance

Letter 1

"Reply to I. I. Stepanov," A. I. Ardel'yan, L. I. Chernyavskaya, I. I. Lipkovich, Inst. Phys. Chem. imeni L. V. Pisarzhevskiy, Acad. Sci. Ukrainian SSR, Kiev

"Zhur. fiz. khim." Vol XXIV, No 7, p. 300-322

Authors reply to B. I. Stepanov's criticism ("Zhur. fiz. khim." Vol XXIV, 1950, p. 300) of their previous article ("Zhur. fiz. khim." Vol XXIV, 1950, p. 26), in which they use of deuterium exchange to study toluene and derivatives. Stepanov accused authors of supporting theory of resonance by their denial of tautomerism in toluene (in favor of P.P. Shorygin) and their proposal of "acid dissociation" scheme. Authors argue that their data proves absence of Shorygin's tautomerism in toluene, taught not to do it only by the derives, and that there is no connection between concept of tautomerism and theory of resonance.

185T17

ZHUNINA, L.A., kand.tekhn.nauk; MIKHLYUKOV, Ye.I., inzh.; KUSOISKIY, G.G.,  
inzh.

Using easily melting clay for glass containers production.  
Sbor. nauch. trud. Bel. politekh. inst. no.82:100-111 '60,  
(Mish 15:5)  
(Glass containers)

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134120017-1

PHM G-10

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(MRA 10-8)

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134120017-1"

Khavt, M.M. V., i.v., 1938 born. Name, M. M. V. Khavt.  
kand. techn. chm., rehrenzert. 1960. Address,  
Ottensen; N.D.H., D.D., franz., etc.

[Electric equipment and cultural instruments of commerce  
tools] T-3000, 1960. Address, 1960. Address, 1960.  
reizmu. hotir. 1960. T-3000, 1960. T-3000, 1960.  
stroomis, 1960. 1960.

MIKHA - BE DRUGA K

POLAND/ Microbiology, Antibiiosis and symbiosis.  
Antibiotics F 2

Abs J ur: Ref Zhur . Biolog., No. 1, 1971, p. 1.

Author : Rolitskaya, Mikha-Bekarek  
Inst : Not given

Title : Changes in Properties of Shigella, Salmonella and  
Escherichia Bacilli Species as Influenced by Streptomyycin.

Orig pub: Zesz. nauk. Univ. Lwowsk., Inst. Biol. Ser. 2, No 2, 1971.

Abstract: By a series of transfers of 40 gram-negative strains of bacteria in a broth with increasing concentrations of streptomycin, variants were obtained resistant to this antibiotic. The gradual increase in resistance in the process of transfer and the modification of biochemical properties at the moment of a marked rise in resistance, in the authors' opinion,

Card 1/2

Abstract: points to the adaptation theory of generation of resistance to streptomycin. Partial saprophytic ability of some varieties of Shigella and Salmonella to decompose lactose, formation of gas from sugars by Shigella, etc.). Lowering of agglutinability of resistant varieties is noted, related, evidently, to the decreased quantity of O antigen.

APPROVED FOR RELEASE 06/14/2000 CIA-RDP86-00513R001134120017-1

Card 2/2

BASS, N.A., inzh.; ZABEZHANSKIY, I.I., inzh.; KARAMZINA, N.A., inzh.;  
MIKHAIENKO, A.P., inzh.

Automatic voltage regulation in the substations of an electric  
power system. Elek. sta. 32 no.12:18-25 D '61. (Milu 15:1)  
(Electric power distribution)

KRASIL'NIKOV, L.V., inzh.; MIKHNEVICH, A.P., inzh.

New developments in the field of automatic voltage regulation.  
(MIRA 16:10)  
Elek. sta. 34 no.9:26-30 S '63.

1943-1944 - 1944-1945 - 1945-1946 - 1946-1947 - 1947-1948 - 1948-1949

ACC : 4 AP6018453

SOURCE CODE: UR/0051/66/020/001 /1083/1035

AUTHOR: Gonchukov, S. A.; Yermakov, G. A.; Mikhnenko, G. A.; Protserov, Fed. D.

ORG : none

TITLE: On the problem of temperature effects in an He-He laser

SOURCE: Optika i spektroskopiya, v. 26, no. 5, 1966, 1083-1085

TOPIC TAGS: gas laser, laser emission, discharge tube, HELIUM-NEON, and LASER  
CHARGE, TEMPERATURE DEPENDENCE, LASER DYNAMICS

**ABSTRACT:** The variation in the power of an Ne-He laser under constant conditions during the first few minutes of the discharge excitation is investigated. This variation is obviously due to the heating up of the tube and the variation in the concentration of the neutral atoms in the gas mixture. When the tube is fired, the radius of the tube varies somewhat. The heating up of the tube decreases the number of particles in the cross section and varies the temperature and concentration of electrons in the discharge. These changes, together with the varying particle velocity distribution, affect the magnitude of the population inversion and thereby the output power of the laser. The output power is plotted as a function of pressure and as a function of the concentration of unexcited atoms with various wall temperatures. The experimental method, conditions, and equipment are described. Results show that there is an optimum concentration at which a peak power is obtained regardless of the temperature and that the power

UDC: 621.375.9:535.096

Card 1/2

L 74800-66

ACC NR: AP6018453

er output is temperature dependent. Reasons for the variation in power output are given. The authors thank A. N. Orayevskiy for discussing the results. Orig. art. 164  
2 figures.

SUB CODE: 20/ SUBM DATE: 08Dec65/ ORIG REF: 001/ OTH PNT: 64  
ATD ADDRESS: 503/

Card 2/2 90

MIKHnenko, L.A., otv. za vypusk; VASIL'YEVA, N.N., tekhn. red.

[Rules for the construction and safe operation of cranes] Pra-vila ustroistva i bezopasnoi ekspluatatsii gruzopod'emnykh kranov. Obiazatel'ny dlia vsekh ministerstv i vedomst. putei soobshcheniya, 1962. 79 p. (MIRA 15:5)

1. Russia (1923- U.S.S.R.) Komitet po nadzoru za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadzoru. (Cranes, derricks, etc.)

PHASE I BOOK EXPLOITATION

SOV/4870

Arnol'dov, Ye. M., T.T. Honta, V.V. Kalechyt's', O.I. Mikhnenco, Ya. M. Meytin,  
O.M. Murzin, D.M. Savych, V.D. Tomashchuk, A.M. Shvans'ky'

Khimichna promyslovist' Ukrayiny (Chemical Industry of the Ukraine) [Kyyiv,  
Derzh. vyd-vo tekhn. lit-ry URSR] 1960. 128 p. 2,000 copies printed.  
(Series: Do dekady ukrayins'koyi literatury ta mystetstva v Moskvi)

Ed.: A.I. Rukavyshnykov; Ed. (Inside Book): L. Raytburd; Tech Ed.: L. Horkavenko.

PURPOSE: This book is intended for the general reader interested in the development  
of the chemical industry of the Ukraine.

COVERAGE: The authors discuss the recent development of several important branches  
of the Ukrainian chemical industry. The text is illustrated with many photographs  
of equipment and installations. No personalities are mentioned. There are no  
references.

~~Card #~~

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134120017-1

KIRGIZSKIE NKO, DOSTAVLYAEME VSEGO 100% KOMPLEKTSOV  
MUKHINENKO, 1972, 1973.

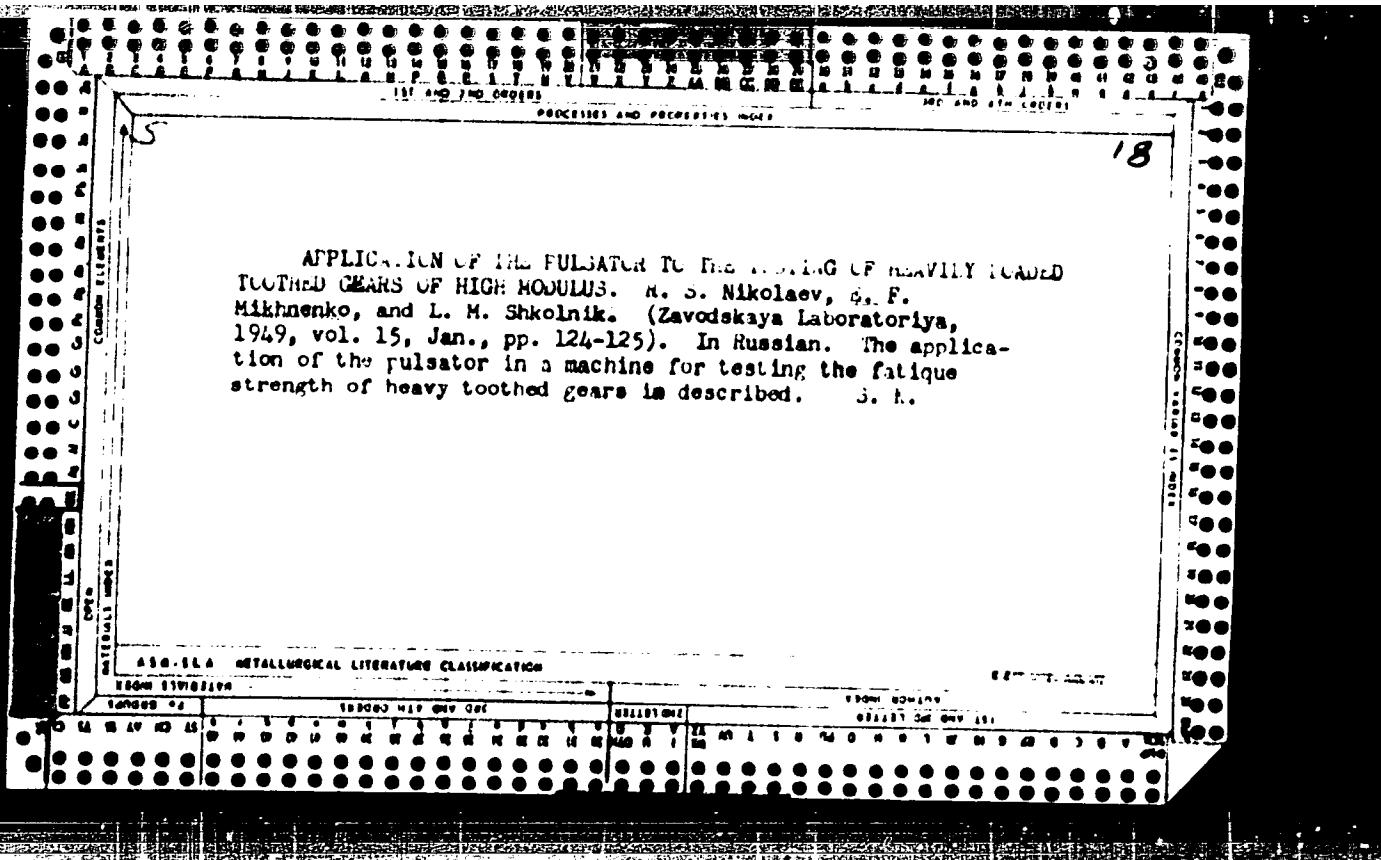
Сентябрь 1973 г. в Киргизии было получено 100%  
Макетов для изображения на марках.

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001134120017-1"

NIKOLAYEV,R.S., kandidat tekhnicheskikh nauk; MIKHNEV, Ye.F., kandidat  
tekhnicheskikh nauk

Causes for short service and breakdowns in railroad traction gearing.  
Tekh.zhel.dor. 7 no.1:19-21 Ja '48. (MIRA 8:11)  
(Gearing)



NIKOLAYEV, R. S., MIKHAILOV, YE. F.

Gearing

New technique in making toothed traction gears. Vest. mash., 32, no. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLAS FILE.

MIKHnenko, Ye.F., kandidat tekhnicheskikh nauk.; CHUVERIN, Yu.I.

Some results of traction tests of the VL23-002 electric locomotive on a flatland section. Vest.TSNII MPS 16 no.3:25-30 My '57.  
(Electric locomotives--Testing)

MIKHINENKO, Ye.F.; LANKIN, P.A.; KALASHNIKOVA, Z.V.

New machines for testing bending of pinion teeth. Sav.lab. 28  
no.7:871-873 '62 (MIRA 15:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo  
transporta.  
(Gearing--Testing)

KAI IKHCVICH, Viktor Nikolayevich; MIKHnenko, Ye.F., kand. tekhn.  
nauk, retsenzent; ZUBLEVSKIY, S.M., inzh., red.;  
DROZDOVA, N.D., tekhn. red.

[Traction gearing of electric locomotives] Tiagovye sub-  
chatye peredachi elektricheskikh lokomotivov. Moskva,  
Transsheldorizdat, 1963. 67 p. (MIRA 16:10)  
(Electric locomotives--Transmission devices)

BYCHKOVSKIY, A.V., kand.tekhn.nauk; MIKHnenko, Ye.P., kand.tekhn.nauk;  
BESPALOV, I.P., inzh.

Basic results of the traction and power testing of series ChS2(ЧС2) electric locomotives for passenger trains. Vest. TChII M-S 22 no.3  
3-8 '63. (MIRA 17:2)

BYCHKOVSKIY, A.V., kand. tekhn. nauk; MIKHAILOV, Ye.F., kand. tekhn. nauk;  
BESPALOV, I.P., inzh.

Measuring wheel pressure on the rail during the movement of electric  
locomotives. Vest. TSNII MPS 23 no.6:13-16 '64. (MRA 17:10)

ZARYANKIN, A.Ye.; MIKHnenkov, L.V.

Calculating losses at a sudden flow expansion. Izv. vys. ucheb.  
zav., av. tekhn. 7 no.3, 50-57 '64. (MIRA 17;9)

ACCESSION NR: AP4014406

S/0143/63/000/012/0064/0072

AUTHOR: Deych, M. Ye. (Doctor of technical sciences, Professor);  
Zaryankin, A. Ye. (Candidate of technical sciences); Mikhnenkov, L. V.  
(Engineer); Frolov, L. B. (Engineer)

TITLE: Effect of throttling ring on the operation of a radial-axial turbine

SOURCE: IVUZ. Energetika, no. 12, 1963, 64-72

TOPIC TAGS: turbine, radial axial turbine, turbine power control, throttling  
turbine control, throttling ring turbine control

ABSTRACT: Controlling turbine power by the introduction of a throttling ring  
between the nozzle-box assembly and the rotor was experimentally investigated.  
A turbine described by A. Ye. Zaryankin, et al. (IVUZ. Energetika, no. 8, 1961)  
was used at 1.82 pressure drop and 0.17, 0.282, and 0.47 relative ring  
throttling. At 47% throttling, the turbine efficiency was 15% lower. The

Card 1/2

ACCESSION NR: AP4014406

theoretical explanation of losses associated with this type of throttling is given in the article. The above-described "attempt to throttle the flow in the gap between the nozzle box and the rotor did not yield favorable results .... and can be recommended for cases where reliable control devices of minimum size are required. The last requirement may prove decisive in transportation plants...."  
Orig. art. has: 7 figures and 13 formulas.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power - Engineering Institute)

SUBMITTED: 19Jun63 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: PR, AP NO REF Sov: 005 OTHER: 000

Card 2/2

J 8567-65 EMT(1)/EPA(b)/EIR/PCG(k) P0-1/P0-1 AEDC(b) W

ACCESSION NR: AP6043419

S/0147/64/000/003/0050/0057

AUTHOR: Zaryankin, A. Ye.; Mikhnenkov, L. V.

B

TITLE: Calculation of losses in a sudden flow expansion

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 3, 1964, 50-57

TOPIC TAGS: diffusor, flow loss, turbomachinery

ABSTRACT: The sudden expansion of a flow in a cylindrical channel is theoretically and experimentally studied. In the stipulated conditions, the flow is subdivided into a free jet and an equalizing zone. The flow diagram shows an abrupt contraction of the potential flow core and an enlargement of the jet proper. This is different from the pattern of a free submerged jet, in which a progressive suction into the jet from the surrounding medium takes place. The application of the equations of momentum and energy leads to the relation

$$\frac{\theta}{\theta_1} = 3 \left( \frac{r_2 - r}{r_2 - r_1} \right)^2 - 2 \left( \frac{r_2 - r}{r_2 - r_1} \right)^3$$

Card 1/3

L 8567-65

ACCESSION NR: AP4043419

(where  $r_1$  is the potential core radius and  $r_2$ , the outer radius of the jet), which describes the velocity profile in a jet with a sudden widening of the flow section. A comparison of calculated and experimental data has shown that the stagnation of the flow on the outer jet boundary increases losses and displaces the optimum degree of expansion in the direction of larger values. If the expansion coefficient  $\mu_{\text{optim}}$  for a uniform velocity field is 2, then this coefficient becomes 3, if real flow structure is taken into consideration. This is explained by the fact that the stagnation of the flow on the jet periphery results in greater losses in the outlet velocity. A considerable increase of the pressure recovery coefficient is observed at small expansion rates. Practically, the main increase in pressure is obtained at an expansion coefficient of 2.5. A further increase of this value only slightly changes the recovery coefficient. This method should be applied to the calculation of conical diffusers whose opening angle is larger than  $30^\circ$ . Orig. art. has: 20 figures and 5 figures.

ASSOCIATION: None

Card: 2/3

L 8567-65

ACCESSION NR: AP4043419

SUBMITTED: 02Jan64

ATD PRESS: 3096

ENCL: 00

SUB CODE: ME, PR

NO REF Sov: 002

OTHER: 000

Card: 3/3

Hyperpolypeptidemia as a symptom of functional insufficiency of the liver. A. I. Mikhnev. Therap. Arch. U. S. S. R. 1938, 8(3) N(1937). Chem. Zentr. 1938, II, 2143; cf. C. A. 33, 42789. Hyperpolypeptidemia in patients suffering from liver disorders is a certain symptom of derangement of the hepatic function and provides a correct picture of the hepatic parenchyma. Thus in acute hepatitis, in parenchymatous cirrosis, etc., an increase in the polypeptide N of the blood is observed. On the other hand, such an increase is not observed in cholecystitis, in which there is no damage to the hepatic parenchyma. In secondary syphilitic hepatitis without irreversible circotic changes it was observed that under the influence of the specific therapy the hyperpolypeptidemia rapidly decreased to normal values. The increase in polypeptides in the blood is explained as due to a derangement of the fixing function of the liver as well as the conversion of the polypeptides into the end products of protein decomp.  
M. G. Moore

AB-1A METALLURGICAL LITERATURE CLASSIFICATION

Ca  
The significance of spontaneous aminoaciduria in liver disorders and the role of the erythrocytes in amino acid metabolism. A. I. Mikhaylova. Akad. Med. Nauk SSSR. 1960, No. 1, 137-140 (1960). Chem. Zentral. 1960, 1, 3072. A hyperaminoaciduria could be detected only in the final stages of cirrhosis of the liver and in tumors of the liver. On the other hand, after the administration of glycine to patients with liver disorders there was a significant increase in the amino acid content in the erythrocytes, which absorbed excessive units of amino acids as a result of the disturbance of the deamination and fixation functions of the liver. In healthy individuals with normal function of the liver no such increase in amino acid content following the administration of glycine was observed. M. G. Al'per

1950, 1951.

"Editor of the Fifty Years of Lenin, Lenin's Life, and His Revolutionary Activities," Academician N. D. Sverdlov, Sov. Sov. Akad. Nauk, Moscow,  
1950.

-e1747-

116

CA

Carbohydrate metabolism in tissues in chronic hepatitis  
A. I. Nizhner...Ukrain. Clin. Med. Inst. I. Trapezi  
Avdzh. 22, No. 1, 13-70 (1959). In chronic hepatitis the  
glycogen content of arterial and venous blood in the fast-  
ing state is above normal and the arterio-venous difference  
is decreased. The arterio-venous difference is lowered in  
the case of sugar and much increased in the case of lactic  
acid. On loading with glucose, sugar and lactic acid rise  
simultaneously in venous and arterial blood. Subcutane-  
ous adrenaline (0.001 mg.) raises sugar and lactic acid in  
parallel manner with smoothing out of arterio-venous dif-  
ference of sugar but increasing it in respect to lactic acid.  
In ailments of the gall bladder, glycogen, sugar, and lactic  
acid contents of blood are normal in the fasting state.  
It is believed that in chronic hepatitis the pancreatic  
function is also affected. G. M. Kosolapoff

MIKHNEV, A.L.; CHEROTAREV, D.P.

Member of the Academy N.D. Strasheko; 75th anniversary. Klin.med.,  
Moskva 29 no.12:16-21 Dec 51. (CLML 21:4)

1. Prof. Mikhnev; Candidate Medical Sciences Chebotarev. 2. Kiev.

11F

CA

Characterization of carbohydrate metabolism in muscle of healthy human subjects. A. I. Mikhnev (Ukrain. Khim. Med. Inst., Kiev). *Fiziol. Zhur. S.S.R.* **37**, 482 (1951).  
In fasting healthy subjects sugar and glycogen are retained by muscle tissues while lactic acid is eliminated into the blood stream. The arteriovenous difference for sugar is 17 mg. %, glycogen 6 mg. %, and lactic acid 1.9 mg. %. Peroral loading with glucose gives max. hyperglycemia in 30 min. (arterial and venous) and max. lactic acid level in 60 min.; at max. hyperglycemia the arteriovenous sugar difference is also max. (32 mg. %). Adrenaline (1 mg.) subcutaneously causes hyperglycemia in healthy subjects with max. in 30-60 min.; arteriovenous difference declines in the 1st hour then reaches supernormal levels in 2.5 hrs.

G. M. Kostanoff

CHEBOTAREV, D.F., kandidat meditsinskikh nauk; MIKHNEV, A.L., professor, direktor;  
KAL'CHENKO, I.I., professor, direktor.

Dynamics of arterial pressure in late pregnancy toxemia. Akush. i gin. no.  
3:15-21 Ky-Je '53. (MLRA 6:7)

1. Ukrainskiy institut klinicheskoy meditsiny imeni akad. N.D.Strasheko  
(for Chebotarev and Mikhnev). 2. Kiyevskiy institut sovershenstvovaniya  
vrachey (for Chebotarev and Kal'chenko).  
(Pregnancy, Complications of) (Blood pressure)

ZHUKOVSKIY, L.I.; MIKHNEV, A.L. professor, ispolnyayushchiy obyaznosti direktor.

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MURHNEV, A.L.

STRAZHESKO, Nikolay Dmitrievich; AYZENBERG, A.A., professor, redaktor;  
YEVTEKHOVA, M.L., dotsent, redaktor; KAVETSKIY, P.Ye., professor,  
redaktor; LIOZINA, Ye.M., dotsent, redaktor; MIKHNEV, A.L.,  
professor, otvetstvennyy redaktor; PRIMAK, F.Ya., professor,  
redaktor; SAYKOWA, V.V., dotsent, redaktor; CHEROTAREN, D.P.,  
professor, redaktor; YANOVSKIY, D.N., professor, redaktor;  
SHEZHIN, M.I., redaktor izdatel'stva; RAHLINA, N.P., tekhnicheskiy  
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MIKHNEV, A.L., professor; QANDZHA, I.M., starshiy nauchnyy sotrudnik (Kiyev)

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~~MIKHNEV, A.L.~~, professor; TONKOMOGIY, I.O., kandidat meditsinskikh nauk;  
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meditsinskoy imeni akad. N.D.Strashensko.  
(PLASMA, ther. use  
deproteinized plasma)

MIKHNEV, A.L., professor; TONKOHOGIY, I.G., kandidat meditsinskikh nauk

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(ARTHRITIS) (RHEUMATIC FEVER) (CORTISONE) (ACTH)

MIKHNEV, A.I., prof.

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MIKHNEV, A.L., prof.; DUPLENKO, K.F., dotsent

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MIKHNEV, A. L., prof., zasluzhennyy deyatel' nauki; DUPLENKO, K. F.,  
dotsent

On the 85th anniversary of the birth of Academician N. D.  
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MIKHNEV, A.L. [Mikhn'ov, A.L.], prof., zasluzhennyy deyatel' nauki;  
DUPLENKO, K.F., kand.med.nauk, dotsent

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3. Glavnyy terapeut ministerstva zdravookhraneniya Ukrainskoj SSR (for Chebotarev).
4. Otvetstvennyy sekretar' Pravleniya Respublikanskogo nauchnogo obshchestva terapevtov Ukrainskoj SSR (for Revutskiy).
5. Zemestiteli predsedatelya Pravleniya Respublikanskogo nauchnogo obshchestva terapevtov Ukrainskoj SSR (for Mikhnev, Chebotarev).

(THERAPEUTICS—CONGRESSES)

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nauk (Kiyev)

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NIKHNEV, A.L., zasluzhennyy deyatel' nauci, prof.; GVATUA, I.A., kand.  
med.nauk

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(HEART—INFARCTION)  
(BLOOD—CIRCULATION DISORDERS OF)

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MIKHNEV, A.L. prof.

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1. Ukrainskiy nauchno-issledovatel'skiy institut klinicheskoy  
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K.F., dots., red.; BEYUMOV, R.Ya., dots., red

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red.

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